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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/593,471

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Joachim Pfeiffer

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EXAMINER

LUU, THANH X

ART UNIT

PAPER NUMBER

2878

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/593,471	<b>Applicant(s)</b> PFEIFFER, JOACHIM	
	<b>Examiner</b> Thanh X. Luu	<b>Art Unit</b> 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This Office Action is in response to amendments and remarks filed October 14, 2008.

Claims 1-25 are currently pending.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Regarding claim 1, it is unclear how many sensor elements are in the invention. Applicant claims "at least two radiation-sensitive sensor elements (pixel)" then claims "two sensor elements". It is unclear if these are the same sensor elements. Further, "the beam path", "the aperture array", "the observed beam path" and "the distribution of levels of intensity" lacks proper antecedent basis. It is also unclear how an optical path is designated as "(d)" and the optical distance is also designated as "(d)".

4. Regarding claim 2, in addition the problems presented with respect to claim 1, "said means" lacks proper antecedent basis. It is unclear which "means" is being referred to.

5. Regarding claim 20, "the scanning period" lacks proper antecedent basis.

6. Regarding claims 21 and 25, it is unclear what "increased adjustment" refers to.

7. Regarding claim 22, "the desired measuring accuracy" lacks proper antecedent basis.

#### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 23 and 24, as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaami et al. (U.S. Patent 6,300,618).

10. Regarding claims 1, 23 and 24, Tanaami et al. disclose (see Figs.) A device and method, comprising a light source (21), imaging optics (14) for focusing the light emitted from the light source onto an object (11) to be scanned, an image detector (30) to detect the light of a point on the object that is backscattered from the object and that passes back through the same imaging optics to at least two radiation-sensitive sensor elements, wherein at least two sensor elements are assigned to an object point irradiated via the imaging optics, means for changing the length (15) of the optical path are provided in the beam path between an aperture array (23) and the object, which optical distance of the image plane can be varied in a specified manner, and means (25, 26) that adjust the accumulation of charges in the at least two sensor elements from the intensity of light of the observed beam path during an exposure period (col. 3, line 27; "one period of the drive") in such a manner that a correlation with the optical distance of the image plane from the imaging optics is created so that an altitude coordinate of the object can be reconstructed (see Fig. 2) from the distribution of the levels of intensity acquired from the at least two sensor elements during the exposure period. Tanaami et al. further disclose a deflecting means (25) and a moveable aperture (pinhole disk 23) as claimed.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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12. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaami et al.

13. Regarding claims 16-19, Tanaami et al. disclose the claimed invention as set forth above. Tanaami et al. do not disclose the type of image detector. However, line sensors, flat panel detectors, CCDs and CMOS image sensors are notoriously well known. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any of the claimed image sensors in the apparatus of Tanaami et al. for any number of desired advantages (cost, size, sensitivity, etc., as known).

14. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaami et al. in view of Fukuda et al. (U.S. Patent 6,697,163).

15. Regarding claims 20 and 21, Tanaami et al. disclose the claimed invention as set forth above. Tanaami et al. do not disclose two separated image detectors as claimed. Fukuda et al. teach (see Fig. 12) detecting with two separate detectors as claimed and having different sensitivities (1/100; 99/100). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any of the claimed detector configuration in the apparatus of Tanaami et al. in view of Fukuda et al. to obtain better dynamic range as taught.

#### ***Allowable Subject Matter***

16. Claims 2-15, 22 and 25 would be allowable once the 112 rejections are overcome without changing the scope of the claims.

#### ***Response to Arguments***

17. Applicant's arguments filed October 14, 2008 have been fully considered but they are not persuasive.

18. Applicant asserts that Tanaami et al. do not disclose two sensor elements and images during a single exposure period. Examiner disagrees. Tanaami et al. uses an imaging camera,

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it is unclear how a multiple pixel imaging camera does not have two sensor elements (two pixels). Further, as clarified above, Tanaami et al. uses a single exposure period. Thus, as set forth above, this rejection is proper.

### ***Conclusion***

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X. Luu whose telephone number is 571-272-2441. The examiner can normally be reached on M-F 6:00AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thanh X Luu/  
Primary Examiner, Art Unit 2878